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BIBLIOGRAPHY, WITH BRIEF HISTORY, OF THE DEPARTMENT OF ZOÖLOGY, UNIVERSITY OF KANSAS, ... *C. E. McClung.*

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BIBLIOGRAPHY, WITH BRIEF HISTORY, OF THE DEPARTMENT OF ZOOLOGY, UNIVERSITY OF KANSAS.

BY C. E. McCLUNG.

(Contribution from the Zoölogical Laboratory, No. 175.)

THE history of a department in an educational institution may be likened in many ways to the history of a race of organisms. It is usually a more or less generalized organization in the beginning, and only after a time reaches the precision and specialization that is characteristic of a well-planned and directed department. Like organic groups, also, it may undergo a degree of specialization that the environment will not support, and, like them, be obliged to suffer in consequence. The department of zoölogy at the University of Kansas is no exception to this rule, and its history is a record of successive adaptations to circumstances with consequent diversity and specialization.

In an endeavor to catalogue and arrange the publications of the department the writer has been obliged to investigate the various stages in the development of this part of the University, and, as a result, has come to the conclusion that it would be both desirable and proper to put on record the facts thus discovered. It is especially appropriate that this be done, since the man who is responsible for the founding of the department has played so large a part in the life of the school from its very beginning up to the present time, and has thereby impressed a strongly scientific cast upon it. Doctor Snow, by his devotion to biology, has succeeded in placing the University of Kansas well up in the ranks of scientific schools, especially on the museum side. It is due him, therefore, that his connection with the department be recorded in detail.*

* It is a matter of great regret to the writer that this slight public appreciation of Doctor Snow should not have appeared during his lifetime; but even as the printer's proof was undergoing revision there came the news of his death, September 20, 1908.

The University catalogue of the year 1866, in the faculty list, shows the name of Frank H. Snow with the title of Professor of Mathematics and Natural Science, but in the following year mathematics does not appear as a part of his official designation. The first step in specialization was thus early taken. No further advance was made, however, until 1899, when biology was made his main work, as appears from the title, Professor of Botany, Entomology, and Meteorology. The professorship in zoölogy at this time descended to Lewis Lindsay Dyche, whose connection with the department of natural history began during his junior college year, when he is recorded, in the catalogue of 1882, as Instructor in Natural History. In 1886 he became Assistant in Natural History, in 1888 Professor of Anatomy and Physiology, and in 1899 Professor of Zoölogy.

During the twenty-four years of his incumbency as Professor of Natural History Doctor Snow gave all the instruction in the general subjects of botany, zoölogy, and geology, and in the special branches of meteorology and entomology. Emphasis was laid upon individual work by the student, and in the catalogue of 1878 it is stated ". . . the chief end to be accomplished is the cultivation of the faculties of observation and comparison." From the beginning, however, his strong interest lay in the development of a museum, and as early as the year 1869 there appears in the catalogue an acknowledgment of the gift of 600 plants, 500 insects, and 50 fish and reptiles by Frank H. Snow. In subsequent catalogues there are always records of the numbers of specimens in the museum. Beginning in 1875 with 30,000, the increase is steady, with an addition of about 10,000 annually, until 100,000 is reached in 1882. The 150,000 mark was passed in 1887, and this remains as the record at the end of Doctor Snow's active teaching period, when he became Chancellor of the University in 1890.

Upon the division of the work in the department of natural history in 1889, Doctor Snow had associated with him W. C. Stevens as Assistant in Natural History and V. L. Kellogg as nated as Director of the Museum, and this title appears after Assistant in Entomology. At this time he was officially desighis name until the catalogue of 1895. The same personnel was maintained in the department until 1894, when W. A. Snow, the elder son of Doctor Snow, took the place of V. L. Kellogg, and Hugo Kahl became Museum Assistant in Entomology. In

1896 S. J. Hunter took up the work of W. A. Snow. A separation of the department of botany under the charge of W. C. Stevens was effected in 1898, when Doctor Snow's title became Professor of Organic Evolution and Entomology. As such it remained until the catalogue of 1901 records it again in the old familiar form of Professor of Natural History and Director of the Museum. In the following year it was again changed, to read Professor of Organic Evolution, Systematic Entomology, and Meteorology, in which form it remains at the present time. After relinquishing the chancellorship Doctor Snow resumed active teaching in the subject of organic evolution, and took up again his favorite work of field collecting in entomology. He has in this time added many thousand specimens to the museum. As a result of his efforts the University of Kansas now possesses one of the three largest collections of insects in this country. If this were the only outcome of his long connection with the University it would be a worthy achievement.

From the original department of natural history there was separated off in 1889 the independent department of geology and paleontology, under the charge of S. W. Williston. This remained unchanged until 1892, when physical geology was made a separate department, with E. Haworth at its head. Doctor Williston's official designation then became Professor of Historical Geology, Vertebrate Anatomy and Physiology, in which form it continued until 1898. At this time a separate department of physiology was created, with Ida H. Hyde in charge, and Doctor Williston's title was changed to Professor of Historical Geology and Vertebrate Anatomy, and Dean of the Medical School, in which form it remained during his connection with the University. Upon his departure in 1902, G. H. Hoxie took up the work in human anatomy and C. E. McClung became Acting Dean of the Medical School. The anatomy work came under the direction of M. T. Sudler in 1905, when he also became Dean of the Scientific Department of the Medical School, and is still in charge.

The history of the zoölogy department proper runs a very uniform course from the time of its formation as a separate department in 1888 until the present time. Professor Dyche had the title of Professor of Anatomy and Physiology, Taxidermist, and Curator of Birds and Mammals, in 1888, and retained it until 1892, when it was shortened to Professor of Zoölogy and Taxidermy. In the following year it was modi-

fied slightly, reading then Professor of Systematic Zoölogy and Taxidermy, and in this form continued afterward unchanged. Gertrude A. Crotty was made assistant in the department in 1889, and remained until 1892. No successor was appointed to her position until 1896, when R. C. Gowell took up the work. His untimely death in the following year again left the place open. The vacancy thus occasioned was filled in the spring term of the year 1897-'98 by the appointment of C. E. McClung, then student assistant in the department of paleontology, as Assistant Professor of Zoölogy. This title was changed in 1900 to Assistant Professor of Histology and Animal Morphology, in 1901 to Associate Professor of Zoölogy, and in 1905 to Professor of Zoölogy. Doctor McClung became head of the department in 1901, and has continued in that capacity since.

The position of Instructor in Zoölogy was established in 1900, and its first incumbent was Walter S. Sutton, who was succeeded in the following year by Maulsby W. Blackman. No further change was made in this place until 1904, when William J. Baumgartner followed Mr. Blackman. In 1905 Mr. Baumgartner became Assistant Professor of Zoölogy, and Miss Mary Augusta Duke was made Assistant Instructor in Zoölogy. Miss Nadine Nowlin took the place of Miss Duke in 1906, and Richard E. Scammon was added to the faculty as Assistant Instructor. A fellowship in biology was founded in 1905 and Roy G. Hoskins was its first holder. It is now entitled a fellowship in zoölogy and its incumbent is Earl Clark.

Upon the departure of Doctor Williston in 1902 the work in vertebrate paleontology reverted to the department of zoölogy, and the title of Curator of Vertebrate Paleontology was transferred to Doctor McClung. Associated with this work as preparator was H. T. Martin. In 1906 he became Assistant Curator of Vertebrate Paleontology and so continues. Previous to the appointment of Mr. Martin as preparator, Judge E. P. West, T. H. Overton, and E. S. Riggs were employed in this capacity. Judge West made extensive collections and inaugurated the work of systematic preparation of specimens. For several years Sidney Prentice was artist in the department.

At various times there have been men connected with the department, some of whom were more or less associated with instruction work, while others had no direct relation to it. Because no mention is made in the earlier catalogues of such

helpers in the museums and laboratories it is impossible to give a complete list, but the following are known to have been associated with the affairs of the department: Messrs. Eames and Wyland were for a number of years employed as taxidermists, and it was during their connection with the museum that the major part of the collections now on exhibition were mounted. Succeeding these men in 1895 was C. D. Bunker, who is yet a member of the department, with the title of Assistant Curator of Birds and Mammals. In 1902 L. A. Adams was made Museum Assistant in Zoölogy, and continued in that position until 1905. While existing as a separate department of paleontology there were employed a number of men, generally graduate students, who devoted some of their time to preparation work. Among these may be mentioned E. C. Case, Alban Stewart, E. S. Riggs, W. N. Logan, and E. H. Sellards.

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In the following list will be found the publications of the department. To determine which papers might properly be included here the following principles of selection were established: (*a*) Include all papers by present members of the department; (*b*) include all papers dealing with zoölogical subjects by members of the department when it was a part of the natural history department; (*c*) include all papers by members of departments now connected with or joined to the present zoölogical department.

Papers are listed according to authors, up to the year 1908. Subsequent articles will receive numbers according to the order of their appearance.

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